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[4910-13]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 43 and 45

[Docket No.: FAA-2000-8017; Amendment No. 43- 38 and 45- 23] EP

RIN 2120-AH11

Safe Disposition of Life-Limited Aircraft Parts

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action responds to the Wendell H. Ford Investment and Reform Act for the 21st Century by requiring that all persons who remove any life-limited aircraft part safely control that part. The disposition must deter the installation of that part after it has reached its life limit. The rule will reduce the risk of life-limited parts being used beyond their life limits. This rule also requires that type certificate and design approval holders of life-limited parts provide instructions on how to mark a part indicating its current status, when requested by persons removing such a part.

DATE(S): Effective *[Insert date 90 days after date of publication in the Federal Register.]*

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SUPPLEMENTARY INFORMATION:

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Background

The FAA has found life-limited parts that exceeded their life-limits installed on type-certificated products during accident investigations and in routine surveillance. Although such installation of life-limited parts violates existing FAA regulations, concerns have arisen regarding the disposition of these life-limited parts when they have reached their life limits.

Concerns over the use of life-limited aircraft parts led Congress to pass a law requiring the safe disposition of these parts. The Wendell H. Ford Investment and Reform Act for the 21st Century (Public Law 106-181), added section 44725 to Title 49, United States Code, as follows:

Sec. 44725. Life-limited aircraft parts

(a) IN GENERAL--The Administrator of the Federal Aviation Administration shall conduct a rulemaking proceeding to require the safe disposition of life-limited parts removed from an aircraft. The rulemaking proceeding shall ensure that the disposition deter installation on an aircraft of a life-limited part that has reached or exceeded its life limits.

(b) SAFE DISPOSITION--For the purposes of this section, safe disposition includes any of the following methods:

(1) The part may be segregated under circumstances that preclude its installation on an aircraft.

(2) The part may be permanently marked to indicate its used life status.

(3) The part may be destroyed in any manner calculated to prevent reinstallation in an aircraft.

(4) The part may be marked, if practicable, to include the recordation of hours, cycles, or other airworthiness information. If the parts are marked with cycles or hours of usage, that information must be updated every time the part is removed from service or when the part is retired from service.

(5) Any other method approved by the Administrator.

(c) * * *

(d) PRIOR-REMOVED LIFE-LIMITED PARTS--No rule issued under subsection (a) shall require the marking of parts removed from aircraft before the effective date of the rules issued under subsection (a), nor shall any such rule forbid the installation of an otherwise airworthy life-limited part.

This rule carries out the requirements of section 44725.

Current Requirements

The type design of an aircraft, aircraft engine, or propeller includes the Instructions for Continued Airworthiness (ICA), which includes the Airworthiness Limitations that describe life limits for parts installed on the product. See, for instance, 14 CFR 21.31(c) and 21.50.

In order for an aviation product to comply with its type design, the life-limited parts installed on it must fall within the acceptable ranges described in the Airworthiness Limitations section of the Instructions for Continued Airworthiness. For this reason, installation of a life-limited part after the mandatory replacement time has been reached would be a violation of the maintenance regulations. Section 43.13(b) requires that maintenance work be completed so that the product worked on "will be at least equal to its original or properly altered condition...." The product is not at least equal to its original or properly altered condition if a life-limited part has reached or exceeded its life limit.

Existing regulations require that specific markings be placed on all life-limited parts at the time of manufacture. This includes permanently marking the part with a part number (or equivalent) and a serial number (or equivalent). See 14 CFR 45.14.

Persons who install parts must have adequate information to determine a part's current life status. In particular, documentation problems may mislead an installer concerning the life remaining for a life-limited part. This rule further provides for the data needs of subsequent installers to ensure they know the life remaining on a part and prevent the part being used beyond its life limit.

Existing regulations provide for records on life-limited parts that are installed on aircraft. The regulations require that each owner or operator under § 91.417(a)(2)(ii) and each certificate holder under § 121.380(a)(2)(iii) or § 135.439(a)(2)(ii), maintain records showing "the current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance." These regulations do not govern the disposition of the part when it is removed from the aircraft. If the part is intended to be reinstalled, however, a record of the life status of the part will be needed at the time of reinstallation to show that the part is within its life limit and to create the required record under §§ 91.417(a)(2)(ii), 121.380(a)(2)(iii), or 135.439(a)(2)(ii), as applicable. Therefore, when a life-limited part is removed from an aircraft and that part is intended to be reinstalled in an aircraft, industry practice is to make a record of the part's current status at the time of removal. Repair stations, air carriers, and fixed base operators (FBO's) have systems in place to keep accurate records of such parts to ensure that they can reinstall the parts and have the required records to show that the part is airworthy.

If the part is not intended to be reinstalled, however, under existing regulations and practice there is no record required or routinely made when a part

is removed from an aircraft. The part may be at the end of its life limit and not eligible for installation. Or, the part may not have reached the end of its life limit, but is so close that reinstallation would not be practicable. In these cases industry practices vary. For instance, the part might be put in a bin and later sold as scrap metal, it might be used as a training aid, or it might be mutilated.

The Notice of Proposed Rulemaking, Notice No. 00-11, proposed procedures for carrying out the statute. 65 FR 58878 (October 2, 2000).

Discussion of Comments and Section by Section Analysis

Thirty-nine commenters provided comments on the proposed rule. The commenters included industry associations, air carriers, manufacturers, repair stations, representatives of employees, a foreign civil air authority, and individuals.

The FAA has made changes to the final rule in response to the comments. The comments are discussed below along with the provisions of the final rule. First we discuss comments not specific to one section, then we discuss more specific comments organized by section. The final rule as adopted is described below.

General Comments

Comment: Some commenters urge that the statute "requires the safe disposition of life-limited parts that have reached or exceeded their life limits."

Comment 33 at 4,^{*} emphasis in original. Some commenters state that the statute was intended to apply only when the part has reached or exceeded its life limit, not each time during the life of the part that it is removed from an aircraft.

FAA Response: The FAA disagrees with the commenters' interpretation of the statute. In paraphrasing the statute the commenters omitted the end of the first

sentence and the beginning of the second sentence of section 44725(a). Those portions have meaning, however. Section 44725(a) provides:

The Administrator of the Federal Aviation Administration shall conduct a rulemaking proceeding to require the safe disposition of life-limited parts removed from an aircraft. The rulemaking proceeding shall ensure that the disposition deter installation on an aircraft of a life-limited part that has reached or exceeded its life limits.

The first sentence does not apply only to parts that have reached or exceeded their life limit. It requires safe disposition of all life-limited parts that are removed from aircraft. Note that one method of safe disposition permitted in section 44725(b)(4) is updating the marking on a part "every time the part is removed from service or when the part is retired from service." This shows that the safe disposition of parts must occur every time the part is removed, not just when the part has reached the end of its life limit or is retired from service.

The second sentence in section 44725(a) requires that the rule deter use of parts beyond their life limits. This does not mean that safe disposition is only required when parts reach their life limits. Indeed, no one can determine whether a part has reached the end of its life unless it has been properly disposed of each time it is removed from an aircraft during its life, ensuring that its current life status is accurately reflected in marking or other records. The NPRM, and the final rule, deter the use of parts beyond their life limits by requiring accurate records each time the part is removed from a type certificated product.

* The documents in the electronic docket are numbered in the order in which they were posted.

Further, it is FAA's experience that most parts that are retired from service have not reached or exceeded their life limits. They may have a few hours or cycles left, and are not considered to have enough life left to make it practical to reinstall them. These parts now often are treated as scrap or discarded. If the FAA were to agree with the commenters that the statute does not apply to such parts, these parts could continue to be placed in the scrap bin with no accurate life status on their markings or other records. The FAA has seen instances in which parts sent for scrap have been reinstalled on aircraft. However, if the part were returned to service, it soon would reach or exceed its life limit. The rule deters use of such parts beyond their life limits by ensuring that the current life status accompanies the part and informs the next user about the life status of that part.

We note also if FAA were to agree with the commenters that the statute does not apply to parts that are retired from service before they have reached their life limits, the statute would apply to very few parts. The FAA does not believe Congress intended the statute to be almost a nullity.

Comment: One commenter suggested that FAA add to § 43.5, Approval for return to service after maintenance, preventive maintenance, rebuilding, or alteration, a new paragraph (d) stating, "The records for life-limited parts show that any such part is serviceable and the remaining life is identified."

FAA Response: The FAA does not concur with this recommendation as this is covered in other portions of the Code of Federal Regulations, which require that records contain "the current status of life-limited

parts of each airframe, engine, propeller, rotor, and appliance." See §§ 91.417(a)(2)(ii), 121.380(a)(2)(iii), and 135.439(a)(2)(ii).

Comment: One commenter states that air carriers will have to change their existing record keeping system. Another states that FAA Form 8130-3, Airworthiness Approval Tag, should be used rather than creating a new system.

FAA Response: FAA has added new § 43.10(c)(1) that permits the part to be controlled using any record keeping system that substantiates the part number, serial number, and current status. The FAA recognizes that many current systems already meet the requirements of the rule.

Comment: One commenter states that the rule should apply to "all life-limited parts at the time of return to service after the effective date." Another commenter states that the rule should state clearly that it is the installer's responsibility to ensure the part is serviceable before it is installed.

FAA Response: Section 44725 of the statute specifically requires the safe disposition of life-limited parts at the time of removal. The FAA agrees that it is the installer's responsibility to determine airworthiness before returning a part to service. This rule assists the installer by ensuring that an accurate record is made at the time of removal.

Comment: One commenter states that the rule does not define responsible persons as certificated persons. Two commenters expressed concerns that non-certificated persons and owners/operators are subject to the proposed rule.

FAA Response: The rule does not apply only to certificated persons that remove parts; it applies to all persons that remove parts. The same safety considerations apply whether the remover is a certificated person or not.

Section by Section Comments

§ 43.1(c) Applicability

Proposal: We proposed a new paragraph (c) in the applicability section of part 43 to include persons who remove, store, and disposition life-limited parts from a type-certificated product.

Comment: Some commenters state that currently the FAA rules do not consider removal of parts as maintenance. They state that including proposed § 43.10 in part 43 will make these activities maintenance and will require that persons who remove, segregate, and disposition life-limited parts be certificated by the FAA. Another commenter states that removal, segregation, and disposing of parts are already standard maintenance practices. Another commenter feels that § 43.1, Applicability, is not needed because proper management of parts is already a part of maintenance.

FAA Response: The NPRM did not address under what circumstances removal, segregation, and disposition of life-limited parts is part of maintenance. The NPRM did not propose that all removal, segregation, and dispositioning must be done by a certificated person. Indeed, the NPRM proposed to expand the applicability of part 43 to clearly cover these tasks in all cases, by adding § 43.1(c).

We note that removal, segregation, and dispositioning of parts is closely related to maintenance, and often is considered to be maintenance. See In the Matter of Stambaugh's Air Service, Inc., FAA Order No. 2001-7 (2001), in which the removal of an engine from a Boeing 737, not for the purpose of performing other maintenance on the aircraft or engine, was itself considered to be maintenance. Proper removal procedures must be used in order to ensure the continued airworthiness of not only the parts removed but also adjacent parts or assemblies. Maintenance manuals have maintenance instructions for proper disassembly and removal procedures to be used in maintaining the aircraft. To maintain the current status of a life-limited part required by regulation, parts must be controlled from the time they are originally installed new through subsequent installations. These controls include maintaining accurate records, proper storage, and approved procedures used for installation and/or removal of the parts.

In any event, this rulemaking does not address under what circumstances removal of a part is considered to be maintenance and must be done by a certificated person, and when removal is not maintenance. This rulemaking does provide that whenever a life-limited part is removed from a type certificated product, the remover must control the part in accordance with this rule.

New § 43.1(c): We changed the wording to be parallel with other § 43.1 paragraphs.

§ 43.10- Disposition of life-limited aircraft parts

Proposal: We proposed adding a new section (§ 43.10) to part 43 to incorporate the new legislation.

Comment: No comments were received on creating a new § 43.10.

New § 43.10: This section carries out section 44725.

§ 43.10(a) Definitions used in this section

Proposal: Paragraph (a) proposed definitions for "life-limited part" and "life status."

Comment: Seven commenters either oppose placing the definition of life-limited part in part 43, or suggest it be moved to part 1, Definitions and abbreviations.

FAA Response: The definition was placed in part 43 as part of this rulemaking to better enhance the understanding of the requirements for life-limited parts.

Comment: Two comments state that the rule applies to type certificated products not used in civil aviation and any civil aircraft with an airworthiness certificate.

FAA Response: The FAA has no jurisdiction over products used for non-aviation purposes. If a product is used for a non-aviation purpose, removal of a part from that product is not governed by part 43 regardless of whether the product also is type certificated for aviation purposes.

Comment: One commenter states that the reference to the "type certificate holder" in the definition of "life-limited part" is not appropriate because some limitations are not included in the type certificate holder's maintenance manual or Instructions for Continued Airworthiness.

FAA Response: Under § 21.31 life limits are considered to be part of the type design; specifically, they are part of the Airworthiness Limitations in the Instructions for Continued Airworthiness in the type design. However, they may actually be published on the type data sheet, in the maintenance manual, or elsewhere, so it might not be obvious that they are part of the ICA. The FAA agrees with the commenter that this could create confusion. The new definition for life-limited part includes the reference to the type design, the Instructions for Continued Airworthiness, and the maintenance manual.

Comment: One commenter asks for an explanation of what could be a mandatory replacement interval other than hours or cycles. Another commenter wants to add such terms as number of landings and flight cycles to the definition of "life status."

FAA Response: The ICA may place limits on the part in such terms as calendar time, number of lifts on a heavy-lift helicopter, or number of allowed overhauls.

Comment: One commenter states that the definition of life-limited part includes non-critical parts and asks whether this was intended.

FAA Response: Yes, both the statute and the rule do not differentiate between critical and non-critical life-limited parts.

New § 43.10(a): This paragraph defines "life-limited part" to mean any part for which a mandatory replacement limit is specified in the type design, the Instructions for Continued Airworthiness, or the maintenance manual. The ICA contains the airworthiness limitations, including life limits. It is considered to be part of the type

design. See § 21.31(c). The ICA may be published as part of the maintenance manual, however, or may appear on the type certificate data sheet or elsewhere. Thus the rule refers to the type design, the Instructions for Continued Airworthiness, and the maintenance manual. The rule also defines "life status" to mean the accumulated cycles, hours, or any other mandatory replacement limit of a life-limited part.

New § 43.10(b) Temporary removal of parts from type-certificated products

Proposal: This paragraph was not proposed in the NPRM.

Comment: Some commenters appear to believe that the rule would apply when a life-limited part was temporarily removed and then reinstalled. This would greatly increase the work of mechanics and others while they removed and reinstalled parts during maintenance.

FAA response: The FAA did not intend the rule to apply during temporary removal. The final rule provides an exception.

New § 43.10(b): This paragraph provides that when a life-limited part is temporarily removed and reinstalled for the purpose of performing maintenance, no disposition under this section is required under specified circumstances. Those circumstances include that the life status of the part has not changed; the removal and reinstallation is performed on the same serial numbered product; and that product does not accumulate time in service while the part is removed.

This situation may occur, for instance, when a life-limited helicopter rotor blade is removed in order to maintain the hub and then reinstalled. The life status of the helicopter and the rotor blade have not changed. There is no purpose served by marking,

tagging, or otherwise carrying out paragraph (c) of this section while the rotor blade is temporarily removed.

New § 43.10(c) Disposition of parts removed from type-certificated products

(Proposed § 43.10(b)) introductory text

Proposal: This paragraph proposed requirements for the safe disposition of any life-limited part removed from a type-certificated product and provided methods to control these parts.

Comment: A commenter states that covering both airworthy and unairworthy parts in this rule may restrict the use of airworthy parts. This would be inconsistent with section 44725(d), which provides that the rule may not forbid the installation of an airworthy part. The commenter believes this would be solved by permitting the use of component history cards rather than marking the parts.

FAA Response: The FAA does not agree that the statute requires safe disposition only of unairworthy parts. As previously discussed, the statute applies to all life-limited parts that are removed from aircraft. The FAA agrees that the safety objective can be achieved by use of a record keeping system rather than marking each part, and the final rule provides for use of a record system.

Comment: Two commenters feel that the new rule seems to mix airworthy parts with unairworthy parts. One commenter states § 43.10 is unclear in distinguishing between when a part fails, when it is removed and returned for service, and when it reaches its life limit.

FAA Response: The intent of this rule is to control life-limited parts when removed from a type certificated product. The FAA added a section that specifically addresses parts being removed for maintenance purposes and reinstalled on the same product. If the removal is not temporary under paragraph (b), the person who removes the part has several options for disposing of the part, and will decide which option to use based on such factors as whether the part failed, was removed for service, or has reached its life limit.

Comment: One commenter states that some aircraft may use the same part but have different life-limits, or the part may be life-limited in one application and not in another.

FAA Response: The FAA agrees. Manufacturers' instructions for certain parts require that the maintenance records include the type of aircraft on which the parts have been used. One example of this is when a particular helicopter manufacturer produces an identical tail rotor blade used on two different model helicopters. When the blades are used on the model with the lower life-limit, that becomes the retirement limit for the blade. This section requires that such a blade must be controlled under this section, regardless of how it has been used. If a person wishes to reinstall it later, they will need the history in sufficient detail to show that the part is eligible for installation.

Comment: One commenter states that "[a]lthough the maintenance provider will be required to mark the 'life status,' there is no corresponding requirement for the owner/operator to provide 'life status'."

FAA Response: Maintenance providers cannot return an aircraft to service without the appropriate records. Therefore, owner/operators routinely provide the necessary records to the maintenance providers. There is no need to add a rule to require that owner/operators provide the life status to the maintenance provider.

Comment: Some commenters state that the rule should apply to owners/operators and not to removers.

FAA Response: The FAA disagrees. The rule applies to persons removing parts because they are the persons who have the part physically available and have direct access to records that show the life that the part has accumulated. Also, in industry practice, persons who remove the parts generally have control over the disposition of the part, though they may consult with the owner/operator before deciding which method to use to control the part.

Comment: Some commenters state that maintenance providers have "no legal ownership rights, interest or authority in the life-limited part to take 'possession' of that article."

FAA Response: The FAA agrees that the maintenance provider may need to consult with the owner/operator before determining which method to use to control the part. Maintenance providers do in fact have possession of the part, while they may not have title to the part. It is current industry practice for maintenance providers to mark, tag, or make record entries regarding the life status of a life-limited part when they remove it.

Comment: Some commenters are concerned that the remover would be liable if the part were ever installed past its life limit.

FAA Response: The FAA does not agree. If the remover controls the part and transfers the records with the part in accordance with this rule, the remover has met his/her responsibilities under this rule. It is incumbent upon any person subsequently installing the part to determine its airworthiness prior to installation. For clarity, the proposed wording "must prevent the part from being installed after it has reached its life limit" has been changed to "must deter the installation of the part after it has reached its life limit."

Comment: A number of commenters question the use of one disposition method over another in various situations. Some object to the requirement to mutilate or segregate parts; some state that industry practice is to have or use record keeping systems.

FAA Response: The rule does not require any particular method in any particular situation as long as one of the methods is used. Each of these methods in this paragraph are part of current industry practice.

New § 43.10(c) introductory text: Paragraph (c) contains the requirements for controlling life-limited parts that are removed from type certificated products. The six methods in the proposal to control the parts have been expanded to seven and subsequent paragraphs were resequenced for clarity.

In accordance with the statute, this rule applies only to life-limited aircraft parts removed after the effective date of this rule. Existing recordkeeping and storage

regulations will continue to apply to the control of life-limited parts removed before the effective date of this rule.

This paragraph provides that each person removing a life-limited part from a type-certificated product must ensure that the part is controlled using one of the methods in this paragraph.

The rule applies at the time of removal because that is when the statute requires the safe disposition to occur. Further, at the time of removal the records for the part's life status in its current installation are most readily available. For instance, the life status may have to be determined by referring to the aircraft records, determining when the part was first installed, and determining how many hours or cycles the aircraft was flown since the part was installed. If the part was stored after removal without its records being immediately updated, there would be more chance of confusion as to its current life status and less chance to determine at a later date what life had accumulated during its prior service. We note that current industry practice is to update the record for the part or to create a new record for the part at the time the part is removed.

The rule applies to persons removing parts because they are the persons who have the part physically available and have direct access to the records that show the life the part has accumulated in its installation. Also, in industry practice the persons who remove parts generally have control over the disposition of the part, though they may consult with the owner or operator before dispositioning the part.

As discussed under the comments, the FAA considers this to be consistent with current industry practice. Often the owner or operator of an aircraft has no interest in parts that were removed, which the maintenance facility controls as it sees fit. At times,

the owner may be given credit for a part that can be repaired, in exchange for a new part that can be installed immediately. The owner also may request that all parts that were removed be returned to the owner. The remover, in any event, is intimately involved in determining the disposition. The remover will determine, for instance, whether the part has useful life remaining, appears to be eligible for reinstallation as is, can be repaired to make it eligible, or is not capable of being repaired. This information is shared with the owner to inform the owner's decision on how to control the part. The new rule will simply take this current relationship to the next logical step of requiring the remover to use one of the disposition methods under this rule.

The definition of "person" in part 1 includes both individuals and entities such as corporations. Repair stations and air carriers are "persons" under part 1. Both the repair station or the air carrier, and the individual employed by the repair station or air carrier, are considered to be the remover of the part, and both are required to carry out the rule. This is similar to the case when maintenance is performed on aircraft. Both the air carrier and the mechanic working for the air carrier are considered to be conducting the maintenance, and both must comply with the maintenance regulations.

The individual who removes the part need not be the same individual who implements the requirements of paragraphs (c)(1) through (7). For example, an air carrier mechanic removing a part might not personally control the part in accordance with one of the methods described in paragraph (c)(1) through (7), but may give the part to the air carrier's material control department to disposition in accordance with the air carrier's procedures manual. The air carrier's procedures must ensure that the part is controlled

using one of the methods in this section. The individual remover has carried out his/her duty under the rule by complying with his/her part of the air carrier's procedures.

The rule applies each time a life-limited part is removed from a type certificated product. This is based on the FAA's interpretation of the statute, as discussed in the General Comments. It is also consistent with the need to maintain accurate records at each step in the part's life to so that it can be determined whether a part has reached the end of its life.

Because it is industry practice to maintain accurate records on parts the remover believes may be reinstalled, we expect that the impact of this rule will be mostly as to parts that they do not believe will be reinstalled. The remover may not believe the parts will be reinstalled because they have reached the end of their life limits. Or, the parts may not have technically reached their life limits and have a few hours or cycles left, but are not considered to have enough life left to make it practical to reinstall them. These parts now often are treated as scrap or discarded. The FAA has seen instances in which parts sent for scrap have been reinstalled on aircraft. If the part were returned to service, however, it soon would reach or exceed its life limit.

This rule deters use of such parts beyond their life limits by ensuring that the current life status accompanies the part and informs the next user about the life status of that part.

Note that the FAA did consider the implications of applying the rule only when the part has reached the end of its life limit. This would have excluded from safe disposition under the rule all those parts that are not at the end of their life limit but have

so little time left that neither the remover nor the owner intend to reinstall them. The FAA's experience is that most parts are discarded at this stage, not at the exact end of their life limit. Under current regulations, such parts may be sold as scrap or otherwise not controlled. Without this rule the current situation could continue, in which such parts may be in the system without accurate records and subject to reuse.

The FAA also considered the implications of applying the rule only to parts that are not intended for reinstallation. However, it is very difficult, sometimes impossible, to determine intent. Further, the remover's intent not to reinstall the part would not be relevant if the part were sold as scrap without updated records to show its current life status. A subsequent owner could be misled as to the current status of the part. Such a rule would be difficult to enforce and difficult to ensure that its safety benefits are realized.

We note that we have expanded the list of acceptable methods of controlling a part to include record keeping systems. Under this rule, all methods that now are used to control life limited parts that are intended for reinstallation also are acceptable for compliance with this rule. Therefore, the actual impact of the rule is minimal.

The statute refers to safe disposition when a life-limited part is removed from an aircraft. However, many life-limited parts are not removed directly from the aircraft. Rather, the type certificated product is removed from the aircraft, and the life-limited part is then removed from the product. For instance, an engine may be removed from the aircraft and taken to a repair station for service. The repair station removes life-limited parts from the engine and determines how to control the parts, such as to reinstall them, to repair them, or to discard them. To

carry out the full safety benefits of the statute and to avoid confusion, the rule applies to parts removed from type certificated products. "Product" is defined in § 21.1(b) to mean an aircraft, an aircraft engine, or a propeller.

New § 43.10(c)(1) Record keeping system

Proposal: This paragraph was not proposed in the NPRM.

Comment: Some commenters state that record keeping systems that currently are used to control life-limited parts should be acceptable for compliance with this section.

FAA response: The FAA agrees. Such systems are used by repair stations, air carriers, and fixed base operators to maintain accurate records of life-limited parts to ensure the airworthiness of the aircraft on which they are installed. When properly carried out these systems comply with the intent of the statute.

New § 43.10(c)(1): This paragraph expressly permits the use of record keeping systems to control life-limited parts. The record keeping system must substantiate the part number, serial number, and current life status of the part. Each time the part is removed from a type certificated product, the record must be updated with the current life status. Many repair stations, air carriers, and fixed base operators have such systems in place now, and use them to control life-limited parts. Some systems are electronic and others use paper.

Note that the current life status of the part does not necessarily include the entire history of the part. While some record systems do contain the entire history, this rule requires only that the current status be in the record system. This will allow persons to determine what life is remaining on the part.

§ 43.10(c)(2) Tag or record attached to part (Proposed § 43.10(b)(5))

Proposal: This paragraph proposed that if it is impractical to mark the life-limited part, a tag may be attached to the part to record the life status.

Comment: Two commenters request clarification of procedures to be used to issue a replacement tag. First, the commenters ask whether a new tag can be issued if a tag is lost and time in service cannot be determined. Second, the commenters suggest we require the tag have sufficient information to provide traceability back to the part if separated.

FAA Response: In response to the first situation, if current status of the life-limited part cannot be established, the part is unairworthy and cannot be returned to service. In response to the second concern, the final rule specifies that the tag have the part number and serial number, which will allow the tag to be traced to the part. Further, the final rule provides for either updating the tag or making a new tag each time the part is removed. An Advisory Circular will be published when the rule is issued to highlight specific sections from the new rule and explain their intent in greater detail.

Comment: Two commenters state that tagging has been used for years and is a standard industry practice. In addition, they state that the rule should not require that the same tag be updated each time the part is removed, because industry practice is to issue a new tag.

FAA Response: The FAA agrees that the use of tags has been an accepted industry practice for years. The final rule provides that either the tag can be updated or a new tag issued.

FAA Response: The FAA agrees that if a part is transferred for the purpose of scrap without permanent markings or mutilation, the tag or other record could be removed from the part. The FAA recommends that before parts are transferred for the purpose of scrap, the part be mutilated or permanently marked, to deter subsequent installation.

New § 43.10(c)(3): This paragraph provides for non-permanent marking of the part. The mark must be updated each time the part is removed from service. Further, if the mark is removed, another method may be used to control the part. For instance, the remover could then use a recordkeeping system to control the part.

§ 43.10(c)(4) Permanent marking (Proposed § 43.10(b)(2))

Proposal: This paragraph proposed that the part may be permanently and legibly marked, when practical, to indicate its life status.

Comment: Several commenters have concerns that permanent marks could destroy the part's integrity.

FAA Response: The FAA agrees. There are parts that cannot be marked for reasons such as the part's size, type of material, or specific application of the part. The FAA recognized that there are cases when marking is impractical or could destroy the part's integrity. Therefore tagging of the part, as well as other methods such as a record keeping system, is permitted under the rule.

Comment: One commenter states that the proposed rule is not clear when a part should be permanently marked.

FAA Response: The proposed rule did not mandate when a part should be permanently marked, only that parts be controlled in accordance with one of the options in the rule.

Comment: One commenter asks whether a part can be tagged, if it was permanently marked multiple times and no space remains for additional marks? Another commenter has concerns with the proposed rule permitting different methods of marking each time the part was removed.

FAA Response: The rule allows for various methods of permanent and non-permanent controls for life-limited parts. If the control method is changed, there must be a means to clearly identify the current life status of the part.

New § 43.10(c)(4): This paragraph provides for permanently marking the part. The mark must be updated each time the part is removed from service. Unless the part is permanently removed from use on type certificated products, this permanent mark must be accomplished in accordance with the instructions under § 45.16 in order to maintain the integrity of the part.

§ 43.10(c)(5) Segregation (Proposed § 43.10(b)(1))

Proposal: This paragraph proposed that the part may be segregated from serviceable parts under circumstances to preclude its installation on a type certificated product, including maintaining a record of the serial number and current life status of the part.

Comment: Some commenters state that the word "serviceable" is not appropriate, in that serviceable has no regulatory meaning.

FAA response: The FAA agrees. "Serviceable" may be used in different ways in the industry. The final rule does not use this term, it uses the term "eligible for installation" to avoid confusion.

Comment: A commenter states that the rule should require the record also contain the part number.

FAA response: The FAA agrees. To fully identify the part, both the part number and the serial number are needed.

New § 43.10(c)(5): This paragraph provides that the part may be segregated using methods that deter its installation on a type-certificated product. These methods must include, at least, maintaining a record of the part number, serial number, and current life status, and ensuring the part is physically stored separately from parts that are currently eligible for installation.

The rule uses the term "physically stored separately" instead of "stored separately" for clarity. It is common industry practice, for instance, to have a separate bin for parts that have reached their current life limits, but whose life limits may be extended in the future. This may occur with a new design for a blade, for instance. Initially a lower life limit may be assigned, but experience may allow the FAA to approve a higher life limit for the blade. In the meantime, the repair station may segregate a blade that has reached the lower life limit in anticipation that the life limit will be extended. The blade is segregated to prevent it from being confused with another blade and being installed.

§ 43.10(c)(6) Mutilation (Proposed § 43.10(b)(3))

Proposal: This paragraph proposed that the part may be destroyed in any manner that prevents installation in a type-certificated product.

Comment: Some commenters state that the rule does not go far enough and it should be mandatory that parts are mutilated when they reach their life limit. There were also concerns that if the remover was not the owner of the part they could be sued for destroying personal property.

FAA Response: The FAA has no regulatory authority to require a person to destroy their personal property. When Congress passed section 44725, it provided other options for controlling the parts, such as segregation or marking parts. The remover of the part likely will consult the owner of the part to determine whether mutilation of the part is acceptable, or whether another of the acceptable methods should be used.

The FAA considers this to be consistent with current industry practice. Often the owner or operator of an aircraft has no interest in parts that were removed, which the maintenance facility disposes of as it sees fit. Or, the owner may be involved in the decision as to how to control the parts. This rule does not change these scenarios. The person removing the part is responsible for controlling the part under this section, but may consult with the owner regarding which method to use.

Comment: Several commenters express concerns that if parts were mutilated they would be unusable for non-aviation purposes such as training aids or other commercial applications.

FAA Response: The rule allows for persons dispositioning the parts to use other acceptable methods such as marking the part using a permanent or non-permanent method or tagging the part.

Comment: Some commenters point out that the term used in the industry is "mutilate" rather than "destroy." They indicate that "mutilate" implies only rendering not repairable, but "destroy" implies a more extensive and expensive effort such as melting down the part.

FAA Response: The FAA agrees, and the final rule uses "mutilate."

New § 43.10(c)(6): This paragraph provides that the part may be mutilated to deter its installation in a type certificated product. The rule provides that the mutilation must render the part beyond repair and incapable of being reworked to provide the appearance of being airworthy.

§ 43.10(c)(7) Other methods (Proposed § 43.10(b)(6))

Proposal: This paragraph provided that any other method approved by the Administrator could be used.

Comment: Two commenters have difficulty determining what other methods would be approved by the Administrator under proposed § 43.10(b)(6).

FAA Response: The final rule includes the additional method of using a record keeping system. The remover may request an alternate method of compliance. This permits the remover to develop another method of compliance not considered in this rulemaking.

New § 43.10(c)(7): This paragraph provides that the part may be controlled using any other method approved or accepted by the Administrator. The FAA cannot

anticipate all possible methods of controlling parts, and will consider any methods that provide at least the same level of safety as those in this rule.

§ 43.10(d) Transfer of life-limited parts (Proposed § 43.10(c))

Proposal: This section proposed that each person removing a life-limited part from segregation, other than for immediate installation, had to ensure the part was controlled using one of the methods in paragraph (b).

The NPRM did not expressly state that records must be transferred with the part. However, the disposition methods that were proposed all inherently involved the record remaining with the part (except for destruction, in which case the record is no longer needed). Marking and tagging involves the record being physically attached to the part, which remains with the part. The NPRM permitted the part to be segregated without the record attached to the part, but provided in proposed § 43.10(c) that when the part is removed from segregation another dispositioning method must be used.

Comment: Two commenters oppose the position that the person removing the part should be responsible even though they may not be the person that controls it, as in the case of a person working for a part 121 or 145 operator.

FAA Response: The FAA recognized in the preamble that the individual removing the part may not necessarily be the individual who controls it. The FAA understands that individuals working for certificated operators have responsibilities for performing specific functions, in which case the individual who removes the part would not necessarily be the individual who controls the part. The repair station or air carrier is also a person under part 1, and under the regulations is also considered the person who removes the part. The repair station or air carrier will have overall responsibility to

ensure that the part is controlled properly under the rule. The individual who removes the part will be in compliance with this rule if the individual carries out his/her portion of the procedures of the repair station or air carrier.

New § 43.10(d): Paragraph (d) provides that each person who removes a life-limited part from a type certificated product and later sells or otherwise transfers that part must transfer with the part the mark, tag, or other record used to comply with this section, unless the part is mutilated before it is sold or transferred. This will ensure that the next user has an accurate record on which to base any decision to use the part.

Note that this applies to all transfers, whether by sale or otherwise. Thus, when a repair station returns the part to the owner, the repair station must also transfer the record.

New § 45.16 Marking of life-limited parts (Proposed § 45.14)

Proposal: The NPRM proposed to add to § 43.14, Identification and disposition of critical components, requiring producers of life-limited parts to provide marking instructions upon request.

Comment: One commenter states that the producers of parts should be required to provide marking information, not just on request. Some commenters state that the information should be in the Instructions for Continued Airworthiness.

FAA Response: The FAA partially agrees. The final rule gives the option of making the information available in readily available documents, such as the maintenance manual or the Instructions for Continued Airworthiness. We anticipate that many type certificate holders and design approval holders will find this to be the most efficient way of providing the information.

To require that all design approval holders of all life-limited parts provide marking information for each part without request may be excessive. There may be no interest in the industry to mark certain parts, given the other options for controlling the parts, and given that some parts may be out of production or not widely used. If the design approval holder never receives a request for marking information it need not develop such information.

Comment: Some commenters state that, while the proposal was for the producer of a part to provide marking instructions, the producer may not be the person responsible for the design or production of the part. The manufacturer may have no ability to provide information on marking the parts.

FAA Response: The FAA agrees. The final rule provides that the holder of a type certificate or design approval must provide the marking instructions. Such persons have responsibility for the design and are in a position to determine whether and how a part can be marked without compromising its integrity.

Comment: Some commenters state that the rule should make clear that marking a part is maintenance and must be done in accordance with part 43.

FAA Response: It does not appear that marking a part is maintenance within the definition in part 1. However, depending on the techniques used, marking may be an alteration of the part. If so, it must be conducted in accordance with part 43.

Comment: Some commenters state that the mix of "critical component" in the title to § 45.14 and "life-limited part" in the rule could cause confusion.

FAA Response: The FAA agrees. The final rule adds § 45.16 to cover marking instructions for life-limited parts rather than amending § 45.14.

Comment: Several commenters point out technical problems with safely marking certain kinds of parts, such as certain metal parts or composite parts.

FAA Response: The FAA agrees that not all parts can be marked without compromising the part's integrity. In that case the type certificate holder or design approval holder should state that the part should not be marked. The remover must then use another method to control the part.

New § 45.16: The FAA determined that the subject matter of § 43.14 was sufficiently different than the current rule to warrant adding a new section.

New § 45.16 provides that when requested by a person required to comply with § 43.10 of this chapter, each holder of a type certificate and each holder of a design approval for a life-limited part must provide marking instructions, or must state that the part cannot be practicably marked without compromising its integrity. This information may be provided by providing marking instructions in readily available documents, such as the maintenance manual or the Instructions for Continued Airworthiness.

While the proposed rule directed the producer of the part to provide the instructions, the final rule states that the holder of the type certificate or design approval must provide the instructions. Often the producer is the same person as the holder of the type certificate or the design approval. However, it is the holder of the type certificate or design approval that has the most direct knowledge of the engineering considerations involved in whether, and how, a part can be marked without compromising its integrity. Marking instructions will include such things as where on the part to locate the mark and what materials or methods to use.

A type certificate under part 21 is a design approval. There are other design approvals issued by FAA, such as a Parts Manufacturing Approval (PMA) under § 21.303 and a Technical Standard Order Authorization (TSOA) under part 21, subpart O. New § 45.16 refers to both type certificate holders and design approval holders for emphasis.

Comments With Economic Implications

Comment: One commenter extrapolated an industry-wide cost estimate of this rule based on its experience with its own numerous repair stations. As did a number of other commenters, this commenter interpreted the language of the NPRM to incorporate temporary removal of life-limited parts, which would require much more frequent application of the rule than the agency intended.

FAA Response: The FAA asked this commenter to clarify his comment because it included an industry-wide cost estimate that used the same methodological approach the agency used, but which resulted in a much larger estimate. The commenter explained that his estimate was based on each removal of each life-limited part done in his repair stations, including temporary removals followed by reinstallation. Because removals to this extent were not intended by the agency, the commenter was asked to revisit his estimate and to exclude temporary removals. When the commenter based his estimate on this clarification, he reduced his original estimate greatly, such that it approximated the FAA's NPRM estimate. The FAA clarified its NPRM language by adding a new § 43.10(b) that excludes application of the rule from temporary removals of parts from type certificated products. The FAA believes that if its clarified language had

been available to the commenter for his NPRM estimate, that estimate would have approximated the agency's NPRM estimate.

Comment: One commenter suggested that 15 minutes, rather than the five minutes the FAA estimated, better approximates the actual average time required to comply with the new rule.

FAA Response: While the agency cannot reject the commenter's estimate of his own average compliance time, the agency cannot agree that the commenter's extrapolation of that estimate to an industry-wide average better approximates the agency's estimate. The FAA's reasons for disagreeing are as follow:

(a) The agency's industry-wide estimate was approximately replicated as noted in the response to the preceding comment; and

(b) The agency notes that appropriate use of record keeping systems - cited elsewhere in these comments and responses as enabling compliance and being in wide use - is very likely to result in nearly instantaneous compliance. This observation is particularly apt for automated systems.

Comment: One commenter proposed the FAA's approach to estimation of benefits and costs be based on the total of, and the life statuses of, the life-limited parts in all aircraft affected by this rule.

FAA Response: While the FAA appreciates the suggestion, for the following reasons, the suggested approach will not support useful estimation:

Within the fleet of aircraft affected by this rule are many and various life-limited parts. Within its limited life, each such part will have reached some life status specific to itself. Each such part will have been installed at some time specific to its aircraft's

requirements. There is no uniform, benchmark installation date for life-limited parts across the fleet of affected aircraft, and there is no uniform life status across the variety of life-limited parts. No useful estimate could be based on so many different moving targets.

However, there is one characteristic all life-limited parts have in common: each will be removed in a manner subject to this rule. Thus, FAA bases its analysis on its estimate of the frequency of annual industry-wide removals subject to this rule.

Comment: One commenter addresses three distinct areas, as follows:

(a) He – and other commenters – challenge the FAA’s assumption that about 625,000 annual removals subject to this rule are most likely to be performed by about 5,000 certificated repair stations. The commenter asserts that each datum is an underestimate, and the agency’s industry-wide cost estimate is thus flawed.

(b) He – and other commenters – challenge the FAA estimate of "potentially affected parties" (as required by the Paperwork Reduction Act) and state that it should be raised from about 5,000 repair stations to about 900,000 individuals who have the potential to remove life-limited parts. The commenter’s total specifically includes "about 720,000" pilots and "about 150,000" aviation mechanics.

(c) This commenter also challenges the FAA’s characterization of this rule in terms of the Regulatory Flexibility Act; a response to that comment is provided separately below.

FAA Response:

(a) The FAA disagrees with the commenter’s statement that 625,000 annual removals are an underestimate that distorts the agency’s industry-wide cost estimate. As

did other commenters noted above, this commenter read the NPRM to mean that temporary removals are subject to this rule. As noted above, for this final rule, the FAA clarified the NPRM language on which the commenter's statement was based.

(b) The FAA disagrees with the commenter's estimate that 900,000 parties will be "potentially affected" by this rule. The FAA understands the term "potentially" to have dimensions of duration and likelihood, in contrast to the commenter's apparent application of the term to all time and any likelihood. The FAA agrees with the commenter that entities other than repair stations may remove life-limited parts subject to this rule. However, the agency stands by its NPRM assertion that most removals will be carried out by employees of repair stations. The FAA's reasons for disagreeing with this comment are as follows:

The commenter notes that there are about 150,000 FAA-certified mechanics in the United States. A clearer statement is that up to about as many as 150,000 individuals are actively employed as aviation mechanics.¹ Of these individuals, few (according to the U.S. Department of Labor) are self-employed.² Thus, the commenter's estimate of 150,000 individual mechanics subject to this rule reduces to a much smaller number of employers with Paperwork Reduction Act responsibility.

While the FAA stands by its NPRM assertion that most removals will be carried out by repair stations, for this final rule, the agency departs from its NPRM estimate of about 5,000 and adopts its most recent actual count of 4,489 repair stations.³

¹ Interview with the Professional Aviation Maintenance Association, June 2001.

² *Occupational Outlook Handbook*, 2000-2001 Edition, U.S. Department of Labor, Aircraft Mechanics and Service Technicians, at <http://stats.bls.gov/oco/ocos179.htm>.

³ Gellman Research Associates, "Active Part 145 Certificate Holders," as of September 2000.

Although some aviation mechanics identify themselves as employees of air carriers or of fixed base operators instead of as employees of the repair stations that these entities operate, the FAA believes that the majority of all aviation mechanics are employed by certificated repair stations.⁴ However, the agency agrees with the commenter that entities other than certificated repair stations may perform removals. These other entities include air carriers, fixed base operators, aviation salvagers, and individual pilots. Each entity will be considered in turn below.

Air Carriers: The FAA believes that certificated air carriers either themselves are operators of certificated repair stations or have their removals of life-limited parts performed by certificated repair stations. Thus, the agency believes that the addition of air carriers to its count of repair stations results in no change in its assumption that most removals are performed by certificated repair stations.⁵

Fixed Base Operators: The FAA notes that some fixed base operators also are certificated repair stations. The agency believes that such fixed base operators are those most likely to remove life-limited parts. The agency believes that there may be a small net addition of non-repair station FBO's to the agency's count of repair stations. The agency is not able to estimate the size of this increment.

Aircraft Salvagers: The FAA notes that salvagers remove life-limited parts from aircraft that are sent for salvage. The FAA believes that, as common business practice, most such salvagers are well aware of the maintenance status of most aircraft they buy to be salvaged. Further, the agency believes that while salvagers generally find

⁴ *Aviation Maintenance*, 1999 and 2000 Annual Salary Surveys, at <http://www.aviationtoday.com/reports/amsalary99.htm>, and follow-up interviews with *Aviation Maintenance* management, June 2001.

⁵ *ibid.*

it in their economic interest to bear the costs of removing and selling only those life-limited parts that have sufficient life demonstrably remaining to be eligible for immediate installation, salvagers also remove some life-limited parts that are not eligible for immediate installation but are deemed suitable for refurbishing.⁶

While the commenter cites FAA Advisory Circular (AC) 00-56 as his basis for his noting that 2,500 aviation broker/dealers are potentially affected parties, this AC provides for the development and maintenance of a list of that subset of these broker/dealers who agree voluntarily to conform to part 43. This list currently has 205 members. The agency believes that most of the parts removals by aircraft salvagers are most likely to be performed by members of this subset. Thus, the agency's final cost estimate adds this subset of 205 to its count of 4,489 repair stations.

Pilots: The commenter notes the existence of the large general aviation community and cites an estimate of about 720,000 pilots in the United States. The FAA notes that pilots who are not also aviation mechanics are permitted to perform preventive maintenance, but not maintenance. The FAA believes that very few, if any, life-limited parts are likely to be removed for any reason in the course of preventive maintenance. Thus, few pilots who are not also aviation mechanics are likely to perform removals that are subject to this rule.

The FAA agrees with the commenter that pilots who are not also certificated mechanics may remove life-limited parts for subsequent re-installation by an aviation mechanic. However, as noted above, temporary removals are not subject to this rule.

⁶ "Salvaging Jetsam..." *The Wall Street Journal*, September 6, 2000, and interviews with cognizant officers of Air Salvage of Dallas and of The Memphis Group, June 2000.

To the commenter's remark about the large size of the general aviation community, the FAA responds that there are about 220,000⁷ active general aviation aircraft in the United States. Of these, about 150,000⁸ are single engine piston airplanes. The FAA believes that most of these 150,000 airplanes have few life-limited parts. Further, in most cases, those life-limited parts are removed by a certificated mechanic, not the pilot. Thus, the likelihood that each of these 720,000 individual pilots would remove a life-limited part from a general aviation aircraft during any one year is very small.

The FAA stands by its NPRM estimate of 5,000 removers subject to this rule. The FAA is adding the 205 broker/dealers to the agency's most recent count of 4,489 repair stations, as well as adding some FBO's that are not certificated repair stations, and some self-employed certificated mechanics. The estimate of 5,000 stands as a ceiling estimate.

Comment: The above commenter asserts that the FAA may not forbear from performing a Regulatory Flexibility Act analysis on the grounds that the costs are owing to the law that prompts the rulemaking, and not to the rule by which the law is implemented.

FAA Response: The NPRM analysis proposed that the average annual costs of compliance with this rule would be about \$1,250 for the 1,500 most involved repair stations and about \$200 for the 3,500 least involved. Continuing analysis in support of

⁷ 2000 GAMA Databook, General Aviation Fleet and Flight Activity, General Aviation Manufacturers' Association, at <http://www.generalaviation.org/databook/2000/index.html>.

⁸ *ibid.*

this final rule, as its requirements have been clarified, suggests these costs are overestimates. For example, of the compliance options available, two are likely to require little or no additional cost. These are: (1) controlling the part by means of a record keeping system that is updated at each removal and which substantiates the part number, serial number, and current life-status of the part; and (2) physical segregation of removed parts. Further, the option of mutilation may include sale of the mutilated part as scrap metal. Such a sale would offset some or all of any additional cost of this option. The agency has not attempted to rework its NPRM estimate in light of this further analysis and clarification.

As the summary Regulatory Evaluation describes, the practice of most removers already approaches the requirements of this rule through the exercise of good shop practice, good business practice, following the guidance of AC's, and complying with those existing CFR's that indirectly constrain the disposition of life-limited parts. Thus, the FAA believes that no entity of any size subject to this rule will incur a significant cost burden.

Paperwork Reduction Act

As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the FAA has submitted a copy of these sections to the Office of Management and Budget for its review. The collection of information was approved and assigned OMB Control Number 2120-0665. This final rule requires that each person who removes any life-limited aircraft part must safely control that part to deter its installation after it has reached its life limit. This rule also requires that type certificate and design approval

holders of life-limited parts provide instructions on how to mark a part indicating its current status, when requested by persons removing such a part.

Comments on the proposal have been addressed previously. In general, comments that dealt with the Paperwork Reduction Act also dealt with estimation of the cost burden.

The likely respondents to this proposed information requirement are persons responsible for removing and dispositioning life-limited parts. The FAA stands by its NPRM estimate of 5,000 total responding entities. However, the agency has revised the composition of this total. In the proposal our estimate included 5,000 certificated repair stations as respondents. For the final rule, the 5,000 responding entities include 4,489 certificated repair stations, 205 salvagers, an indeterminate number of fixed base operators that are not certificated repair stations, and an indeterminate number of self-employed certificated aviation mechanics will carry out the requirements of this rule.

The FAA estimates each of 1,500 of the 5,000 entities noted above will perform 300 such procedures as an annual average. Each of the remaining 3,500 will average 50 procedures annually. Thus, the annual frequency of information requirements is 625,000 procedures.

The FAA refined its NPRM estimate of annual burden, and has determined that there is no more than a minimal paperwork burden on any respondent. Both the proposal and the final rule estimate are based on 625,000 annual removals subject to the rule. In the NPRM each removal was estimated to require record keeping and reporting requirements of five minutes duration, at \$50 per hour. Thus for the NPRM, the total annual estimated burden of Public Law 106-181 was about \$2,600,000, borne by a total

of 5,000 respondents. In the final rule this estimate is decreased by an indeterminate amount because the rule is satisfied by the--

(a) Control for safe-disposition of life limited parts through the appropriate use of record keeping systems that are known to be in wide use; and

(b) Physical segregation of life-limited parts that have little or no remaining capacity as airworthy parts. Many certificated operators and air agencies are known to make use of this method of control.

While a respondent may find it useful to satisfy the rule by one or more of the remaining options, the FAA believes that neither case above is likely to result in an additional Paperwork Reduction Act burden.

Further, the option of mutilation is likely to reduce the NPRM estimate. This option may include the sale of the mutilated part as scrap metal. Such a sale would offset some or all of any additional cost of this option.

Because FAA has not attempted to determine the preference ranking by respondents of the options permitted under this rule, it has no basis by which to estimate the amount the choice of these options will decrease the NPRM estimate. Thus, the NPRM estimate should be considered to be a ceiling cost.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number.

International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization

(ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA determined that there are no ICAO Standards and Recommended Practices that correspond to these regulations.

Regulatory Evaluation Summary

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Trade Agreements Act of 1979 (19 U.S.C. 2531-2533) prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, this Trade Act requires the consideration of international standards and, where appropriate, that they be the basis of U.S. standards. And fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4) requires Federal agencies to prepare a written assessment of the costs, benefits and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of \$100 million or more, in any one year (adjusted for inflation).

However, for regulations with an expected minimal impact the above-specified analyses are not required. If it is determined that the expected impact is so minimal that the proposal does not warrant a full evaluation, a statement to that effect and the basis for it is included in the evaluation.

Consistent with Department of Transportation policies and procedures for simplification, analysis, and review of regulations, this rule is deemed to have a minimal impact, and does not warrant a full evaluation. The FAA has reviewed the comments generated by the NPRM regarding this rule, and has refined its NPRM analysis, and finds no justification to change its determination of minimal impact.

Expected Benefits

This rule will increase safety benefits by decreasing the possibility of installation into a type-certificated product of life-limited parts that have reached their life-limits. While no existing FAA rule specifies the safe disposition of a life-limited part that is not intended, permissibly, to be re-installed, in general, current industry shop and business practices already inhibit such installation. These practices generally reflect the direction and guidance of numerous, distinct current FAA regulatory and advisory publications. The agency has not attempted to quantify the incremental safety benefits of this rule.

Expected Costs

It is the FAA's intent that this rulemaking would specify only the requirements necessary to bring industry into compliance with Public Law 106-181. Thus, the FAA expects that additional compliance costs will be attributable to the legislation and not to the rule.

The implementation of the legislation that directs this rule adds to existing requirements, and consequently to costs, by requiring that each person removing a life-limited part from a type-certificated product must control the disposition of that part by record keeping, marking, tagging, segregating, mutilating, or any other approved or accepted method that deters the installation of that life-limited part that has reached its

life limit. However, as above, although no existing FAA rule specifies the safe disposition of a life-limited part that is not intended, permissibly, to be re-installed, in general, current industry shop and business practices already inhibit such installation. Also as above, these practices generally reflect the direction and guidance of numerous, distinct current FAA regulatory and advisory publications.

The cost estimate for this final rule refines the NPRM estimate and revises it downward by an indeterminate amount. The NPRM estimate assumed that about 5,000 business entities would perform almost all of the activities subject to this rule. Of these entities, about 1,500 would perform about 300 rule-subject removals annually, while the remaining 3,500 would perform about 50. Each removal was assumed to require an additional 5 minutes at \$50 per hour. Thus, each larger remover would incur an additional annual cost of about \$1,250. Annual costs for each smaller remover would be about \$200. Each amount was given in 2001 dollars.

This final rule estimate departs from those assumptions and estimates for two reasons, as follow:

(a) The rule is satisfied by the safe-disposition of life limited parts through the use of record keeping systems that are known to be in wide use.

(b) The rule is satisfied by the physical segregation of life-limited parts that have little or no remaining capacity as airworthy parts. Many certificated operators and air agencies are known to make use of this method of control.

While a remover may find it useful to satisfy the rule by one or more of its other options, the FAA believes that neither case above is likely to result in additional cost. In fact, a respondent may well have a record keeping system in place and also physically

segregate parts as appropriate. Further, the option of mutilation may include the sale of the mutilated part as scrap metal. Such a sale would offset some or all of any additional cost of this option.

Because FAA has not attempted to determine the preference ranking by respondents of the options permitted under this rule, it has no basis by which to estimate the amount the choice of these options will decrease the NPRM estimate. Thus, the NPRM estimate should be considered to be a ceiling cost.

Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (5 U.S.C. 601 et seq.) establishes "as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the business, organizations, and governmental jurisdictions subject to regulation." To achieve that principle, the Act requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions. The Act covers a wide-range of small entities, including small businesses, not-for-profit organizations and small governmental jurisdictions.

Agencies must perform a review to determine whether a proposed or final rule will have a significant economic impact on a substantial number of small entities. If the determination is that it will, the agency must prepare a regulatory flexibility analysis as described in the Act.

However, if an agency determines that a proposed or final rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the 1980 act provides that the head of the agency may so certify and a

regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

This final rule estimate was refined and reduced from the NPRM estimate. The earlier estimate resulted in 1,500 larger removers each incurring an additional annual cost of about \$1,250. Additional annual costs for each of the 3,500 smaller removers were estimated at about \$200. Each amount was given in 2001 dollars.

As noted previously, these NPRM estimates must be taken as ceiling estimates because of the--

- (a) Existing use of compliant record keeping systems,
- (b) Existing practice of physically segregating life-limited parts that have little or no remaining capacity as airworthy parts, and
- (c) Likelihood that some or all of the costs of the option of mutilation will be offset by the sale of the mutilated part as scrap metal.

As stated previously, the agency has made no attempt to estimate the amount by which these factors reduce the NPRM estimates.

Because this rule imposes no more than minimal economic effects on removers of any size, whether small or large, the FAA certifies that it will not have a significant impact on a substantial number of small entities.

Trade Impact Assessment

The Trade Agreement Act of 1979 prohibits Federal agencies from engaging in any standards or related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international

standards and where appropriate, that they be the basis for U.S. standards. In addition, consistent with the Administration's belief in the general superiority and desirability of free trade, it is the policy of the Administration to remove or diminish to the extent feasible, barriers to international trade, including both barriers affecting the export of American goods and services to foreign countries and barriers affecting the import of foreign goods and services into the United States.

The FAA has determined the potential effect of this rule will be minimal and, in accordance with the above statute and policy, holds that this rule will not result in an impact on international trade by companies doing business in or with the United States.

Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995, enacted as Public Law 104-4 on March 22, 1995, is intended, among other things, to curb the practice of imposing unfunded Federal mandates on State, local, and tribal governments. Title II of the Act requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in a \$100 million or more expenditure (adjusted annually for inflation) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a "significant regulatory action."

This rulemaking does not contain such a mandate. Therefore, the analytical requirements of Title II of the Unfunded Mandates Reform Act of 1995 do not apply.

Regulations Affecting Interstate Aviation in Alaska

Section 1205 of the FAA Reauthorization Act of 1996 (110 Stat. 3213) requires the Administrator, when modifying regulations in title 14 of the CFR in a manner

affecting interstate aviation in Alaska, to consider the extent to which Alaska is not served by transportation modes other than aviation, and to establish such regulatory distinctions as he or she considers appropriate. The FAA received no comments on whether there is justification for applying the rule differently in interstate operations in Alaska. Because this rule has a minor impact on current operations, including that it applies only to the subsequent use of these life-limited aircraft parts, it will not affect interstate aviation in Alaska. Accordingly, FAA has determined that there is no need to apply the rule differently in interstate operations in Alaska.

Executive Order 13132, Federalism

The FAA has analyzed this rule under the principles and criteria of Executive Order 13132, Federalism. We determined that this action would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, we determined that this rulemaking would not have federalism implications.

Environmental Analysis

FAA Order 1050.1D defines FAA actions that may be categorically excluded from preparation of a National Environmental Policy Act (NEPA) environmental impact statement. In accordance with FAA Order 1050.1D, appendix 4, paragraph 4(j), this rulemaking action qualifies for a categorical exclusion.

Energy Impact

The energy impact of this rule has been assessed in accordance with the Energy Policy and Conservation Act (EPCA) Public Law 94-163, as amended (42 U.S.C. 6362)

and FAA Order 1053.1. It has been determined that the rule is not a major regulatory action under the provisions of the EPCA.

List of Subjects

14 CFR Part 43

Aircraft, Aviation safety, Life-limited parts, Reporting and recordkeeping requirements.

14 CFR Part 45

Aircraft, Exports, Signs and symbols.

The Amendment

In consideration of the foregoing, the Federal Aviation Administration amends Chapter I of Title 14, Code of Federal Regulations, as follows:

PART 43—MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND ALTERATION

1. *Revise* Amend the authority citation for part 43 to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44703, 44705, 44707, 44711, 44713, 44717, 44725.

2. Add § 43.1(c) to read as follows:

§ 43.1 Applicability.

* * * * *

(c) This part applies to all life-limited parts that are removed from a type certificated product, segregated, or controlled as provided in § 43.10.

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3. Add § 43.10 to read as follows:

§ 43.10 Disposition of life-limited aircraft parts.

(a) Definitions used in this section. For the purposes of this section the following definitions apply.

Life-limited part means any part for which a mandatory replacement limit is specified in the type design, the Instructions for Continued Airworthiness, or the maintenance manual.

Life status means the accumulated cycles, hours, or any other mandatory replacement limit of a life-limited part.

(b) Temporary removal of parts from type-certificated products. When a life-limited part is temporarily removed and reinstalled for the purpose of performing maintenance, no disposition under paragraph (c) of this section is required if—

- (1) The life status of the part has not changed;
- (2) The removal and reinstallation is performed on the same serial numbered product; and
- (3) That product does not accumulate time in service while the part is removed.

(c) Disposition of parts removed from type-certificated products. Except as provided in paragraph (b) of this section, after [the effective date of the final rule] each person who removes a life-limited part from a type-certificated product must ensure that the part is controlled using one of the methods in this paragraph. The method must deter the installation of the part after it has reached its life limit. Acceptable methods include:

(1) Record keeping system. The part may be controlled using a record keeping system that substantiates the part number, serial number, and current life status of the part. Each time the part is removed from a type certificated product, the record must be updated with the current life status. This system may include electronic, paper, or other means of record keeping.

(2) Tag or record attached to part. A tag or other record may be attached to the part. The tag or record must include the part number, serial number, and current life status of the part. Each time the part is removed from a type certificated product, either a new tag or record must be created, or the existing tag or record must be updated with the current life status.

(3) Non-permanent marking. The part may be legibly marked using a non-permanent method showing its current life status. The life status must be updated each time the part is removed from a type certificated product, or if the mark is removed, another method in this section may be used. The mark must be accomplished in accordance with the instructions under § 45.16 of this chapter in order to maintain the integrity of the part.

(4) Permanent marking. The part may be legibly marked using a permanent method showing its current life status. The life status must be updated each time the part is removed from a type certificated product. Unless the part is permanently removed from use on type certificated products, this permanent mark must be accomplished in accordance with the instructions under § 45.16 of this chapter in order to maintain the integrity of the part.

(5) Segregation. The part may be segregated using methods that deter its installation on a type-certificated product. These methods must include, at least—

(i) Maintaining a record of the part number, serial number, and current life status, and

(ii) Ensuring the part is physically stored separately from parts that are currently eligible for installation.

(6) Mutilation. The part may be mutilated to deter its installation in a type certificated product. The mutilation must render the part beyond repair and incapable of being reworked to appear to be airworthy.

(7) Other methods. Any other method approved or accepted by the FAA.

(d) Transfer of life-limited parts. Each person who removes a life-limited part from a type certificated product and later sells or otherwise transfers that part must transfer with the part the mark, tag, or other record used to comply with this section, unless the part is mutilated before it is sold or transferred.

4. *Revise the*
The authority citation for part 45 is amended to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 44109, 40113-40114, 44101-44105, 44107-44108, 44110-44111, 44504, 44701, 44708-44709, 44711-44713, 44725, 45302-45303, 46104, 46304, 46306, 47122.

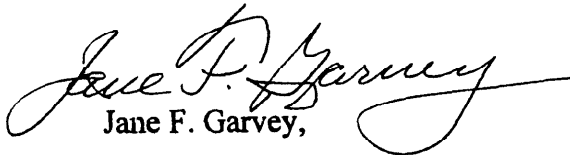
5. Add § 45.16 to read as follows:

§ 45.16 Marking of life-limited parts.

When requested by a person required to comply with § 43.10 of this chapter, the holder of a type certificate or design approval for a life-limited part must provide marking instructions, or must state that the part cannot be practicably marked without

compromising its integrity. Compliance with this paragraph may be made by providing marking instructions in readily available documents, such as the maintenance manual or the Instructions for Continued Airworthiness.

Issued in Washington, DC, on JAN - 3 2002

A handwritten signature in cursive script, reading "Jane F. Garvey". The signature is fluid and extends to the right with a long horizontal stroke.

Jane F. Garvey,

Administrator.